

REMARKS

Reconsideration of the present application is respectfully requested. Claims 8-9, 11, 13 and 19-26 were previously canceled. Claims 1, 3, 4, 6, 7, 12, 14, 17 and 27 have been amended. Claims 28-30 are newly added. No new matter has been added.

Therefore, claims 1-7, 10, 12, 14-18 and 27-30 are now pending.

Summary of Office Action

Claims 1-7, 10, 12, 14-18 and 27 stand rejected for obviousness- type double patenting based on the parent patent, U.S. Patent no. 6,636,879. Claims one and 14 stand rejected under 35 USC section 112, second paragraph, has being indefinite. Claims 1, 6, 7, 14, 16 and 27 stand rejected under 35 U.S.C. § 102(b) based on U.S. Patent no. 5, 819, 292 of Hitz et al. ("Hitz"). Claims 2-5, 10, 12, 15 and 17-18 stand rejected under 35 U.S.C. § 103(a) based on Hitz in view of U.S. Patent no. 6, 038, 570 of Hitz et al.

Obviousness-Type Double Patenting Rejection

Submitted with this amendment is a terminal disclaimer, which Applicants believe overcomes the obviousness type double patenting rejection.

Section 112 rejections

It is believed that the amendments to the independent claims render the rejections under 35 U.S.C. § 112 moot.

Prior Art Rejections

Claim 1 recites, *inter alia*, the limitation:

determining, for each one of a plurality of regions of said storage blocks in said mass storage system, a value indicative of a number of storage blocks available for writing data in said region, based on said active map and at least one snapshot of the file system . . .

Claim 14 recites a similar limitation. The cited art does not disclose or suggestion this functionality.

Although the Examiner is not specific about this, it appears that the Examiner interprets the block map (“blkmap”) file in Hitz as being the “active map” in Applicants’ claims and interprets the inode map (“inomap”) file in Hitz as containing “value[s] responsive to a number of storage blocks available for writing data in each one of said plurality of regions . . .” as per Applicants’ claims prior to this amendment (Office Action, pp. 4-5). The blkmap in Hitz contains a 32-bit entry for each 4 KB block in the system, indicating whether that block is free or allocated (32 bits are used, rather than just one bit, partly because the system tracks allocation of snapshots as well as allocation in the active file system). The inomap file contains an 8-bit value for each block in the inode file, indicating the number of inodes contained in that block (each block in the inode file can contain up to 32 inodes) (col. 10, lines 21-32).

However, in contrast with Applicants’ claims, the values in the inomap file in Hitz are *not determined based on an active map* (e.g., the blkmap), *nor are they determined based on at least one snapshot of the file system*. Each value simply indicates *the number of inodes* that have been stored in the corresponding block of the inode file. Furthermore, there is no suggestion in the cited art of determining, for each of a plurality

of regions of storage blocks, a value indicative of a number of storage blocks available for writing data in said region, based on an active map and at least one snapshot of the file system, nor is there any suggestion of the desirability of doing so.

Therefore, independent claims 1 and 14 are neither anticipated nor obvious based on the cited art. Therefore, claims one and 14 and all claims which depend on them are allowable over the cited art.

New claims

It is noted that the “equal” limitation previously recited in claim 1 has been deleted, and a similar limitation is now recited in newly added dependent claim 28.

In addition, Applicants would like to direct the Examiner's attention to newly added dependent claims 29 and 30, which recite that “each of said plurality of regions of said storage blocks comprises a plurality of storage blocks, *at least some of which store user data.*” Metadata is data which describes or relates to other data, such as user data. The distinction between user data and metadata is well known in the art and is also clear in Hitz: see, e.g., col. 1, lines 48-49, and col. 9, lines 18-21. This limitation, therefore, further distinguishes the “regions” of storage blocks in Applicants' claims, which contain *user data* per claims 29 and 30, from the inodes, inode file and inode map (“inomap”) file in Hitz, which are *metadata*, not user data. In contrast with claims 29 and 30, Hitz does not disclose or suggest determining any value which indicates the number of storage blocks available for writing data in a region of storage blocks *that contain user data*. Therefore, claims 30 and 31 are further patentable over the cited art for this additional reason.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

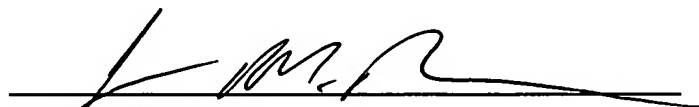
Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: September 25, 2006



Jordan M. Becker
Reg. No. 39,602

Customer No. 08791
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025
(408) 720-8300